UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,401	09/03/2008	Hans-Peter Hauser	0040-0173PUS1	8660

2292 7590 04/15/2011
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
TSAY, MARSHA M	

ART UNIT	PAPER NUMBER
1656	

NOTIFICATION DATE	DELIVERY MODE
04/15/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/595,401	HAUSER ET AL.	
	Examiner	Art Unit	
	Marsha M. Tsay	1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *12-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/13/06; 11/04/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Applicant's election with traverse of Group I, claims 1-11, 15-16, in the reply filed on January 26, 2011 is acknowledged. The traversal is on the ground(s) that in the present application, the "technical relationship" or "special technical feature" involved with all of the claims is the modified factor VIII cDNA. Applicants submit that this technical feature relationship and special technical feature is common to the invention recited in all the claims, and thereby provides clear unity of invention. This is not found persuasive because as noted in the text of the restriction requirement, Plantier et al. teach a modified factor VIII cDNA having a truncated intron I sequence of factor IX inserted in factor VIII cDNA at factor VIII introns 1, 2, and 13. Therefore, the technical feature linking the inventions of Groups I-III does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art.

The requirement is still deemed proper and is therefore made FINAL.

Claims 12-14 have been withdrawn from further consideration by the Examiner because they are drawn to non-elected inventions. Claims 1-11, 15-16 are currently under examination.

Priority: The request for priority to EPO 03023637.6, filed October 16, 2003, is acknowledged. A certified copy of the foreign priority document has been filed in this case on April 13, 2006, and is in an English language.

Failure to Comply with the Sequence Rules

Where the description of a patent application discusses a sequence of 4 or more amino acids, reference must be made to the sequence by use of the sequence identifier preceded by

"SEQ ID NO:" in the text of the description even if the sequence is also embedded in the text of the description of the patent application (see 37 CFR 1.821, especially paragraphs (a)-(d)). The sequence identifier may be used in either the drawing or the Brief Description of Drawings (see MPEP 2422).

Objection to the Specification:

The specification is objected to for failure to comply with the sequence rules for the reasons as given above. The specification refers to sequences without identifiers at page 11. The SEQ ID NO. that is provided must be in computer readable form (CRF). Appropriate correction is required.

Claim Objections

Claims 1, 4 are objected to because of the following informalities: claim 1 is objected to because it is missing a period at the end of the claim; claim 4 is objected to because the term "FIX" should be spelled out in full (i.e. factor IX (FIX) the first time that the term is recited in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 11 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a process for producing a biologically active recombinant human factor VIII does not reasonably provide enablement for derivatives of human factor VIII. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The scope of the instant claims is not commensurate with the enablement of the instant disclosure, because practice of the claimed invention would require undue experimentation by an artisan of ordinary skill in the art to ascertain which derivatives of human factor VIII function in the same way as the wild-type protein. Thus there could be thousands of variants which contain substitutions, deletions, additions etc. Thus for the instant claimed invention, it would require an undue burden of experimentation for a skilled artisan to determine exactly which derivatives were active.

The factors to be considered in determining whether undue experimentation is required are summarized In re Wands 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988). The court in Wands states: "Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue,' not 'experimentation.' " (Wands, 8 USPQ2d 1404). Clearly, enablement of a claimed invention cannot be predicated on the basis of quantity of experimentation required to make or use the invention. "Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations." (Wands, 8 USPQ2d 1404). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of

experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

In the instant case the quantity of experimentation would be large since there are myriad substitutions, deletions or insertions to choose from. The amount of guidance in the specification is zero with regard to which amino acids in human factor VIII are essential for biological activity. No working examples are present of derivative human factor VIII proteins. The nature of the invention is such that many different proteins that are substantially similar to human factor VIII may or may not have biological activity. The state of the prior art is that even proteins that are 99% similar to the wild-type protein are at times not fully active. The relative level of skill in this art is very high. The predictability as to what substantially similar protein will have which activity is zero.

When the factors are considered in their entirety, the Wands analysis dictates a finding of undue experimentation and thus, the claim is not enabled.

Claim 16 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated host cell, does not reasonably provide enablement a host cell in a human body. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The claim is drawn to a host cell comprising a modified factor VIII cDNA, wherein said host cell is in a human body. The specification contemplates that the modified factor VIII cDNA may be integrated into a transfer vector for use in human gene therapy (p. 9). However, the specification has failed to provide any guidance for introducing a modified factor VIII cDNA into a host cell, wherein the host cell is in a human body. Moreover, the specification has failed to provide guidance with respect to a vector, route of administration, or level of expression that would correlate to expression of a modified factor VIII in vivo for the purpose of treating a human body. Since the instant specification has failed to provide specific guidance or working examples correlating to a host cell in vivo comprising a modified factor VIII cDNA, one of skill in the art could not rely on the state of the gene therapy art to produce a recombinant host cell in vivo comprising a modified factor VIII cDNA to provide therapy.

The factors to be considered in determining whether undue experimentation is required are summarized In re Wands 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988). The court in Wands states: "Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue,' not 'experimentation.' " (Wands, 8 USPQ2d 1404). Clearly, enablement of a claimed invention cannot be predicated on the basis of quantity of experimentation required to make or use the invention. "Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations." (Wands, 8 USPQ2d 1404). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or

absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

In the instant case the quantity of experimentation is unpredictable in determining whether a host cell in vivo comprising a modified factor VIII cDNA will express a therapeutic protein necessary to provide therapy. Verma et al. 1997 teach that a problem has been an inability to deliver genes efficiently and to obtain sustained expression" (page 239, col. 3). Anderson (1998) states that "there is still no conclusive evidence that a gene-therapy protocol has been successful in the treatment of a human disease" (page 25, col 1) and concludes, "Several major deficiencies still exist including poor delivery system, both viral and no-viral, and poor gene expression after genes are delivered" (page 30). Besides the general expectation that it will require years of further research to develop effective gene therapy (Anderson, page 30), it would require extensive research to understand the fundamental biology of the system. With regard to expression of factor VIII in a recombinant cell, Soukharev et al (Blood Cells, Molecules, and Diseases, 2002, 28(2): 234-248) observed that factor VIII is expressed at different levels in various cell types in vitro. See page 236, at column 1. The specification however, has failed to provide guidance as to which cell type would be optimal for expressing and secreting modified factor VIII in vivo, the route of administration for targeting the desired cell type or the type of vector necessary to introduce a modified factor VIII cDNA into the desired, cell type and achieve a sufficient level of expression for treatment in a human body. Given the lack of guidance provided by the specification and the quantity of experimentation required for introducing a modified factor VIII cDNA into a host cell, wherein the host cell is in

a human body, it would have required undue experimentation to make and use the invention as claimed without a reasonable expectation of success.

Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The claim recites biologically active human factor VIII or its derivative. Vas-Cath Inc. V. Mahurkar, 19USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the 'written description' inquiry, whatever is now *claimed."* The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." As stated above, biologically active human factor VIII or its derivative. However, the skilled artisan cannot necessarily envision the detailed structures of ALL of the derivatives of human factor VIII that have the same functional activity as the wild-type human factor VIII because nowhere in the specification is it described which amino acids are even essential and critical for the wild-type protein to maintain its functionality, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the methods of making the claimed invention. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating or making it. The compound itself is required. See Fiers v. Revel,

25 USPQ2d 1601 at 1606 (CAFC 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11, 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-8, 11, 15-16 recite the term "characterized" to describe the instant modified factor VIII cDNA. The claims are indefinite because it is unclear whether the limitations following "characterized" are part of the invention.

Claim 8 recites the limitation "the human factor VIII" in the claim. There is insufficient antecedent basis for this limitation in the claim and its dependent claims. Additionally, claim 8 recites amino acid residues; however, there is no SEQ ID NO. provided. The SEQ ID NO. that is provided must be in computer readable form (CRF).

Claim 11 recites a biologically active recombinant human factor VIII. Claim 11 is dependent on claim 10, which does not recite a modified human factor VIII cDNA. Further clarification is requested.

Claims 9-10 are included in this rejection because they are dependent on the above claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8-11, 15-16 are rejected under 35 U.S.C. 102(a) and 102(e) as being anticipated by Negrier et al. (US 20030083257) (Negrier '257).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Negrier '257 teach a modified factor VIII cDNA comprising at least one spliceable nucleotide sequence that is inserted into the wild-type factor VIII cDNA at the original position of at least one intron of the genomic factor VIII DNA, wherein said at least one intron is selected from the group consisting of intron 1 and intron 13 (p. 6 claims 1-2; instant claim 1-3, 5-6). Negrier '257 also teach that a truncated FIX intron can be inserted in intron positions 1 and 13

(p. 2 [0025]; instant claim 4). Negrier '257 teach a linker peptide of at least two amino acids which are selected from lysine and arginine (p. 6 claim 11; instant claim 8). Negrier '257 teach an expression vector comprising the modified factor VIII cDNA and a host cell of animal origin comprising said expression vector (p. 6 claim 4-5; instant claims 9-10, 15-16). Negrier '257 also teach a process for producing a recombinant human factor VIII protein (p. 6 claim 16; instant claim 11).

Claims 1-6, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Plantier et al. (2001 Thromb Haemost 86: 596-603; IDS 11.04.08, previously cited). Plantier et al. teach a modified factor VIII cDNA where a truncated factor IX intron 1 sequence was inserted in place of factor VIII introns 1, 12, and 13 and also as a combination between introns 1 and 12, and introns 1 and 13 and expression vector comprising said modified factor VIII cDNA (p. 596, p. 597; instant claim 1-6, 9). Plantier et al. teach that the factor IX splicing donor and acceptor sequences were placed just after or before the factor VIII coding sequence (p. 597, fig. 1; instant claim 1-6). Plantier et al. further teach a process for producing a recombinant factor VIII from said modified factor VIII cDNA and a host cell comprising said modified factor VIII cDNA (p. 598; instant claim 10-11).

Claims 1-6, 9-11, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Negrier et al. (US 6271025) (Negrier '025). Negrier '025 teach a modified factor VIII cDNA wherein at least one insertion site of the truncated factor IX intron 1 is chosen from factor VIII intron 1 splice site, factor VIII intron 12 splice site, and factor VIII intron 13 splice site and a vector

comprising said modified factor VIII cDNA (col. 15-16, see also Fig. 1; instant claims 1- 6, 9). Negrier '025 also teach a host cell comprising said vector comprising said modified factor VIII cDNA (col. 4 lines 37-61; instant claim 10). Negrier '025 further teach a HepG2 cell model comprising said modified factor VIII cDNA (col. 5 lines 15-33; instant claim 15). Negrier '025 also teach a process for producing a recombinant factor VIII protein (col. 5-6; instant claim 11).

Claims 1-6, 9-11, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Negrier et al. (US 6800461) (Negrier '461).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Negrier '461 teach a process for producing a recombinant factor VIII protein from a modified factor VIII cDNA (col. 17-18; instant claim 11). Negrier '461 teach a modified factor VIII cDNA wherein at least one insertion site of the truncated factor IX intron 1 is chosen from factor VIII intron 1 splice site, factor VIII intron 12 splice site, and factor VIII intron 13 splice site and a vector comprising said modified factor VIII cDNA (col. 3 lines 26-44, see also Fig. 1; instant claims 1- 6, 9). Negrier '461 also teach a host cell comprising said vector comprising said modified factor VIII cDNA (col. 4 lines 55-65; instant claim 10). Negrier '461 further teach

a HepG2 cell model comprising said modified factor VIII cDNA (col. 5 lines 40-60; instant claim 15).

Claims 1-6, 9-11, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Negrier et al. (US 6780614) (Negrier '614).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Negrier '614 teach a modified factor VIII cDNA wherein at least one insertion site of the truncated factor IX intron 1 is chosen from factor VIII intron 1 splice site and factor VIII intron 13 splice site and a vector comprising said modified factor VIII cDNA (col. 2 lines 9-18, col. 2 line 27; instant claims 1- 6, 9). Negrier '614 also teach Dami cells comprising said vector comprising said modified factor VIII cDNA (col. 5 lines 45-55; instant claim 10, 15). Negrier '614 also teach a process for producing a recombinant factor VIII protein (col. 9-10; instant claim 11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Negrier et al. (US 20030083257) (Negrier '257). The teachings of Negrier '257 are outlined above. Negrier '257 disclose β-globin intron 1 (p. 6 claim 3); however, Negrier '257 do not teach β-globin intron 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute a β-globin intron 2 for the β-globin intron 1 because it would be reasonable for one of ordinary skill to substitute other introns of β-globin (i.e. β-globin intron 2) into the modified factor VIII cDNA since Negrier '257 discloses that β-globin intron 1 can be successfully inserted into a modified factor VIII cDNA (instant claim 7).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 11 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6800461 (Negrier '461). Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claim and the Negrier '461 claims are drawn to a process for the production of a factor VIII protein comprising preparing a modified Factor VIII cDNA wherein said Factor VIII cDNA is modified by insertion of a truncated factor IX intron in one or more splice sites of the factor VIII cDNA, introducing the modified factor VIII cDNA into a cell, and expressing the modified factor VIII cDNA in said cell to produce factor VIII protein.

Claims 1-6, 11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. US 6780614 (Negrier '614). Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and the Negrier '614 claims are drawn to a modified factor VIII cDNA comprising a factor IX intron inserted at intron position 1 and intron position 13 of the factor VIII cDNA and a process for producing a factor VIII from said modified factor VIII cDNA. The specification of Negrier '614 disclose intron positions 1 and intron positions 13 of factor VIII cDNA (col. 2 lines 9-18).

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marsha M. Tsay whose telephone number is (571)272-2938. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath N. Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha M. Tsay/
Primary Examiner, Art Unit 1656

April 11, 2011